

What is claimed is:

1. A semiconductor container opening/closing apparatus, comprising:

a stage for placing a semiconductor container accommodating a semiconductor wafer;

a connection portion for connecting an opening of said semiconductor container and an opening of a semiconductor manufacturing apparatus;

an opener for holding a lid of said semiconductor container and then opening and closing said lid in a direction vertical to an opening surface of the container; and

an opener elevator mechanism for moving down the opener holding the lid of said semiconductor container so as to connect the opening of said semiconductor container and the opening of said semiconductor manufacturing apparatus while both of the openings are opened, or for moving up said opener so as to close the connection between said openings,

wherein an operating velocity of opening the container by the opener is set such that a velocity-differential pressure ratio obtained by dividing the maximum velocity at the time of opening the lid of said semiconductor container, by the differential pressure between the inside pressure and the outside pressure of said semiconductor manufacturing apparatus, becomes 0.06 ((m/s) Pa) or less.

2. A semiconductor container opening/closing apparatus, comprising:

a stage for placing a semiconductor container accommodating a semiconductor wafer;

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a connection portion for connecting an opening of said semiconductor container and an opening of a semiconductor manufacturing apparatus;

an opener for holding a lid of said semiconductor container and then opening and closing said lid in the direction vertical to an opening surface of the container;

an opener elevator mechanism for moving down the opener holding the lid of said semiconductor container so as to connect the opening of said semiconductor container and the opening of said semiconductor manufacturing apparatus while both of the openings are opened, or for moving up said opener so as to close the connection between said openings; and

a cover for covering both said opener having moved down and said opener elevator mechanism,

wherein an opening is provided at a lower end portion of said cover in the rear side of said semiconductor container opening/closing apparatus.

3. The semiconductor container opening/closing apparatus according to claim 2,

wherein an exhaust fan is provided at a lower end portion of said cover in the rear side of said semiconductor container opening/closing apparatus.

4. A semiconductor device manufacturing method, comprising the steps of:

accommodating a semiconductor wafer in a semiconductor container and conveying between each semiconductor manufacturing apparatus;

connecting an opening of said semiconductor container and

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an opening of said semiconductor manufacturing apparatus;

connecting said openings such that a velocity-differential pressure ratio obtained by dividing the maximum velocity at the time of vertically opening a held lid of said semiconductor container, by the differential pressure between the inside pressure and the outside pressure of said semiconductor manufacturing apparatus, is set to be 0.06 ((m/s) Pa) or less; and

processing a semiconductor wafer accommodated in said semiconductor container.

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